

780 CMR 52.00

DEFINITIONS

(Note: Chapter 52 is unique to Massachusetts)

780 CMR 5201 GENERAL

5201.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of 780 CMR 51.00 through 99.00, have the meanings indicated in 780 CMR 52.00.

5201.2 Interchangeability. Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

5201.3 Terms Defined in Other Codes. Where terms are not defined in 780 CMR 51.00 through 99.00 such terms shall have meanings ascribed to them as in other code publications of the International Code Council *or Code of Massachusetts Regulations (CMRs)*.

5201.4 Terms not Defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

780 CMR 5202 DEFINITIONS

ACCESSIBLE. Signifies access that requires the removal of an access panel or similar removable obstruction.

ACCESSIBLE, READILY. Signifies access without the necessity for removing a panel or similar obstruction.

ACCESSORY STRUCTURE. In one- and two-family dwellings not more than three stories high with separate means of egress, a building, the use of which is incidental to that of the main building and which is located on the same lot.

[B] ADDITION. An extension or increase in floor area or height of a building or structure.

AIR CIRCULATION, FORCED. A means of providing space conditioning utilizing movement of air through ducts or plenums by mechanical means.

AIR-CONDITIONING SYSTEM. A system that consists of heat exchangers, blowers, filters, supply, exhaust and return-air systems, and shall

include any apparatus installed in connection therewith.

[B] ALTERATION. Any construction or renovation to an existing structure other than repair or addition that requires a permit. Also, a change in a mechanical system that involves an extension, addition or change to the arrangement, type or purpose of the original installation that requires a permit.

(ALTERNATE INSPECTOR. A person appointed to act in the absence of the inspector of buildings or building commissioner in case of illness, disability or conflicting interest. An alternate inspector shall meet or exceed the minimum qualifications defined by M.G.L. c. 143, § 3 for an inspector of buildings/building commissioner and shall be certified in accordance with Special Regulation 110.R7 (see Appendix A).

[B] ANCHORS. See “Supports.”

ANNUAL FUEL UTILIZATION EFFICIENCY (AFUE). *The ratio of annual output energy to annual input energy, which includes any nonheating season pilot input loss, and for gas or oil-fired furnaces or boilers, does not include electrical energy.*

APPLIANCE. A device or apparatus that is manufactured and designed to utilize energy and for which 780 CMR 51.00 through 99.00 provides specific requirements.

APPROVED. Approved refers to approval by the building official as the result of investigation and tests conducted by him or her, or by reason of accepted principles or tests by nationally recognized organizations.

APPROVED AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved by the building official.

ASPECT RATIO. The ratio of the height to width (h/w) of a shear wall. The shear wall height is the maximum clear height from top of foundation or diaphragm to bottom of diaphragm framing above and the shear wall width is the

THE MASSACHUSETTS STATE BUILDING CODE

sheathed dimension in the direction of applied force on the shear wall.

ATTIC. The unfinished space between the ceiling joists of the top story and the roof rafters.

BACKFLOW PREVENTER, REDUCED-PRESSURE-ZONE TYPE. A backflow-prevention device consisting of two independently acting check valves, internally force loaded to a normally closed position and separated by an intermediate chamber (or zone) in which there is an automatic relief means of venting to atmosphere internally loaded to a normally open position between two tightly closing shutoff valves and with means for testing for tightness of the checks and opening of relief means.

BACKFLOW, WATER DISTRIBUTION. The flow of water or other liquids into the potable water-supply piping from any sources other than its intended source.

[B] BALCONY, EXTERIOR. An exterior floor projecting from and supported by a structure without additional independent supports.

[B] BASEMENT. That portion of a building that is partly or completely below grade (*see* “Story above grade”).

BASEMENT WALL. The opaque portion of a wall that encloses one side of a basement and has an average below grade wall area that is 50% or more of the total opaque and non-opaque area of that enclosing side.

BASIC WIND SPEED. Three-second gust speed at 33 feet (10 058 mm) above the ground in Exposure C (*see* 780 CMR 5301.2.1) as given in 780 CMR Figure 5301.2(4).

BOARD OF BUILDING REGULATIONS AND STANDARDS (BBRS). *In accordance with M.G.L. c. 143, § 94, the Board responsible for the development and promulgation of 780 CMR 51.00 through 99.00. See M.G.L. c. 143, § 93 for the Board’s makeup and 780 CMR 95.00 through 100.00 for additional responsibilities of the BBRS.*

BOILER. *A closed vessel in which water is heated, steam is generated, steam is superheated, or any combination thereof, by the application of heat from combustible fuels in a self-contained or attached furnace. Note that gas-fired boilers are addressed by 248 CMR and oil-fired boilers are addressed by 527 CMR.*

[B] BOND BEAM. A horizontal grouted element within masonry in which reinforcement is embedded.

BACKFLOW PREVENTER. A device or means to prevent backflow.

[B] BRACED WALL LINE. A series of braced wall panels in a single story constructed in accordance with 780 CMR 5602.10 for wood framing or 780 CMR 5603.7 or 5301.1.1 for cold-formed steel framing to resist racking from seismic and wind forces.

[B] BRACED WALL PANEL. A section of a braced wall line constructed in accordance with 780 CMR R602.10 for wood framing or 780 CMR R603.7 or R301.1.1 for cold-formed steel framing, which extend the full height of the wall

BTU/H. The listed maximum capacity of an appliance, absorption unit or burner expressed in British thermal units input per hour.

BUILDING. *Building shall mean any one- and two-family dwelling or portion thereof that is used, or designed or intended to be used, for human habitation, for living, sleeping, cooking or eating purposes, or any combination thereof, and shall include accessory structures thereto.*

BUILDING CODE ENFORCEMENT OFFICIAL. *The term used to refer collectively to inspectors of buildings, building commissioners and local inspectors. All building code enforcement officials shall meet or exceed the minimum qualifications for the position as defined by M.G.L. c.143, § 3 and shall be certified in accordance with Special Regulation 780 CMR 110.R7 (see 780 CMR 110; also see definition for “Building official”).*

BUILDING COMMISSIONER. *The administrative chief of the building department in a municipality who is charged with the administration and enforcement of 780 CMR 51.00 through 99.00 (see also “Inspector of buildings” and “Building official”). All building commissioners shall meet or exceed the minimum qualifications for the position as defined in M.G.L. c. 143, § 3 and shall be certified in accordance with Special Regulation 780 CMR 110.R7 (see 780 CMR 110).*

BUILDING ENVELOPE. *The elements of a building which enclose heated or cooled spaces through which thermal energy is capable of being transferred to or from the exterior or to or from spaces exempted by the provisions of 780 CMR 6101.4.1.*

BUILDING, EXISTING. *An existing building that has been legally occupied for five or more years and is also a building erected prior to the adoption of 780 CMR 51.00 through 99.00, or one for which a legal building permit has been issued.*

BUILDING LINE. The line established by law, beyond which a building shall not extend, except as specifically provided by law.

[B] BUILDING OFFICIAL. The officer or other designated authority charged with the administration and enforcement of 780 CMR 51.00 through 99.00.

CERTIFICATE OF APPROVAL. *A written document from the appropriate building official approving an action, type of material, and the like.*

CERTIFICATE OF USE AND OCCUPANCY. *The certificate issued by the building code enforcement official which permits the use of a building in accordance with the approved plans and specifications and which certifies compliance with provisions of law for the use and occupancy of the building in its several parts, together with any special stipulations or conditions of the building permit.*

CERTIFICATION *(In reference to building code enforcement officials). See definitions for “Building commissioner”, “Inspector of buildings” and “Local inspector.” Also see Special Regulation 780 CMR 110.R7.*

CERTIFICATION *(In reference to manufactured buildings and building components). Any manufactured building or building component that meets the provisions of Special Regulation 780 CMR 110.R3.*

CHANGE OF USE. *An alteration by change of use in a building heretofore existing to a new use group which imposes other special provisions of law and/or regulation governing building construction, equipment or means of egress*

[B] CHIMNEY. A primary vertical structure containing one or more flues, for the purpose of carrying gaseous products of combustion and air from a fuel-burning appliance to the outside atmosphere.

CHIMNEY CONNECTOR. A pipe that connects a fuel-burning appliance to a chimney.

[B] CHIMNEY TYPES.

Residential-type Appliance. An approved chimney for removing the products of

BUILDING THERMAL ENVELOPE. See “Building envelope”.

BUILT-UP ROOF COVERING. Two or more layers of felt cemented together and surfaced with a cap sheet, mineral aggregate, smooth coating or similar surfacing material.

CEILING HEIGHT. The clear vertical distance from the finished floor to the finished ceiling.

CENTRAL STATION, CENTRAL STATION FIREALARM SYSTEM AND CENTRAL STATION SERVICES. See NFPA 72, as listed in 780 CMR 100.

combustion from fuel-burning, residential-type appliances producing combustion gases not in excess of 1,000°F (538°C) under normal operating conditions, but capable of producing combustion gases of 1,400°F (760°C) during intermittent forces firing for periods up to one hour. All temperatures shall be measured at the appliance flue outlet. Residential-type appliance chimneys include masonry and factory-built types.

CLADDING. The exterior materials that cover the surface of the building envelope that is directly loaded by the wind.

CLOSET. A small room or chamber used for storage.

CODE OF MASSACHUSETTS REGULATION (CMR). *Regulations that are codified by the Secretary of State, Commonwealth of Massachusetts. 780 CMR 100. lists various CMRs applicable to building construction and/or design.*

COEFFICIENT OF PERFORMANCE (COP)—COOLING. *The ratio of the rate of heat removal to the rate of energy input, in consistent units, for a complete cooling system or factory-assembled equipment, as tested under a nationally recognized standard or designated operating conditions.*

COEFFICIENT OF PERFORMANCE (COP)—HEAT PUMP—HEATING. *The ratio of the rate of heat delivered to the rate of energy input, in consistent units, for a complete heat pump system under designated operating conditions. Supplemental heat shall not be considered when checking compliance with the heat pump equipment.*

COMBUSTIBLE MATERIAL. Any material not defined as noncombustible.

THE MASSACHUSETTS STATE BUILDING CODE

COMBUSTION AIR. The air provided to fuel-burning equipment including air for fuel combustion, draft hood dilution and ventilation of the equipment enclosure.

CONDENSATE. The liquid that separates from a gas due to a reduction in temperature, *e.g.*, water that condenses from flue gases and water that condenses from air circulating through the cooling coil in air conditioning equipment.

CONDENSING APPLIANCE. An appliance that condenses water generated by the burning of fuels.

CONDITIONED AIR. Air treated to control its temperature, relative humidity or quality.

CONDITIONED AREA. That area within a building provided with heating and/or cooling systems or appliances capable of maintaining, through design or heat loss/gain, 68°F (20°C) during the heating season and/or 80°F (27°C)

CONSTRUCTION CONTROL. The compilation of Building Code requirements found in 780 CMR 1, Section 116 or otherwise referenced in 780 CMR and directed toward all buildings and structures requiring registered architectural services or registered professional engineering services in accordance with M.G.L. c. 143, § 54A; M.G.L. c. 112, §§ 60A through 60L; and, M.G.L. c. 112 §§ 81D through 81T.

[B] CONSTRUCTION DOCUMENTS. Written, graphic and pictorial documents prepared or assembled for describing the design, location and physical characteristics of the elements of a project necessary for obtaining a building permit. Construction drawings shall be drawn to an appropriate scale.

CONVECTOR. A system-incorporating heating element in an enclosure in which air enters an opening below the heating element, is heated and leaves the enclosure through an opening located above the heating element.

[B] CORROSION RESISTANCE. The ability of a material to withstand deterioration of its surface or its properties when exposed to its environment.

[B] COURT. A space, open and unobstructed to the sky, located at or above grade level on a lot and bounded on three or more sides by walls or a building.

CRIPPLE WALL. A framed wall extending from the top of the foundation to the underside of

during the cooling season, or has a fixed opening directly adjacent to a conditioned area.

CONDITIONED FLOOR AREA. The horizontal projection of the floors associated with the conditioned space.

CONDITIONED SPACE. For energy purposes, space within a building that is provided with heating and/or cooling equipment or systems capable of maintaining, through design or heat loss/gain, 50°F (10°C) during the heating season and 85°F (29°C) during the cooling season, or communicates directly with a conditioned space. For mechanical purposes, an area, room or space being heated or cooled by any equipment or appliance.

CONFINED SPACE. A room or space having a volume less than 50 cubic feet per 1,000 Btu/h (4.83 L/W) of the aggregate input rating of all fuel-burning appliances installed in that space.

the floor framing of the first story above grade plane.

DALLE GLASS. A decorative composite glazing material made of individual pieces of glass that are embedded in a cast matrix of concrete or epoxy.

DAMPER, VOLUME. A device that will restrict, retard or direct the flow of air in any duct, or the products of combustion of heat-producing equipment, vent connector, vent or chimney.

[B] DEAD LOADS. The weight of all materials of construction incorporated into the building, including but not limited to walls, floors, roofs, ceilings, stairways, built-in partitions, finishes, cladding, and other similarly incorporated architectural and structural items, and fixed service equipment.

[B] DECK. An exterior floor system supported on at least two opposing sides by an adjoining structure and/or posts, piers, or other independent supports.

[B] DECORATIVE GLASS. A carved, leaded or Dalle glass or glazing material whose purpose is decorative or artistic, not functional; whose coloring, texture or other design qualities or components cannot be removed without destroying the glazing material; and whose surface, or assembly into which it is incorporated, is divided into segments.

DEGREE DAY, COOLING. *A unit, based on temperature difference and time, used in*

estimating cooling energy consumption and specifying nominal cooling load of a building in summer. For any one day, when the mean temperature is more than 65 °F (18 °C), there are as many degree days as there are degrees Fahrenheit (Celsius) difference in temperature between the mean temperature for the day and 65 °F (18 °C). Annual cooling degree days (CDD) are the sum of the degree days over a calendar year.

DEGREE DAY, HEATING. *A unit, based on temperature difference and time, used in estimating heating energy consumption and specifying nominal heating load of a building in winter. For any one day, when the mean temperature is less than 65 °F (18 °C), there are as many degree days as there are degrees Fahrenheit (Celsius) difference in temperature between the mean temperature for the day and 65 °F (18 °C). Annual heating degree days (HDD) are the sum of the degree days over a calendar year.*

DESIGN PROFESSIONAL. *See definition of “Registered design professional” in 780 CMR 52.00.*

DIAMETER. Unless specifically stated, the term “diameter” is the nominal diameter as designated by the approved material standard.

DRAFT HOOD. A device built into an appliance, or a part of the vent connector from an appliance, which is designed to provide for the ready escape of the flue gases from the appliance in the event of no draft, backdraft or stoppage beyond the draft hood; prevent a backdraft from entering the appliance; and neutralize the effect of stack action of the chimney or gas vent on the operation of the appliance.

[B] DRAFT STOP. A material, device or construction installed to restrict the movement of air within open spaces of concealed areas of building components such as crawl spaces, floor-ceiling assemblies, roof-ceiling assemblies and attics.

DUCT SYSTEM. A continuous passageway for the transmission of air which, in addition to ducts, includes duct fittings, dampers, plenums, fans and accessory air-handling equipment and appliances.

DWELLING. Any building that contains one or two dwelling units used, intended, or designed to be built, used, rented, leased, let or hired out to be occupied, or that are occupied for living purposes.

[B] DWELLING UNIT. A single unit providing complete independent living facilities for one or

[B] DIAPHRAGM. A horizontal or nearly horizontal system acting to transmit lateral forces to the vertical resisting elements. When the term “diaphragm” is used, it includes horizontal bracing systems.

DIRECT-VENT APPLIANCE. *A system consisting of an appliance, combustion air and flue gas connections between the appliance and the outside atmosphere, and a vent cap supplied by the manufacturer, and constructed so that all air for combustion is obtained from the outside atmosphere and all flue gases are discharged to the outside atmosphere.*

DRAFT. The pressure difference existing between the appliance or any component part and the atmosphere, that causes a continuous flow of air and products of combustion through the gas passages of the appliance to the atmosphere.

Induced Draft. The pressure difference created by the action of a fan, blower or ejector, that is located between the appliance and the chimney or vent termination.

Natural draft. The pressure difference created by a vent or chimney because of its height, and the temperature difference between the flue gases and the atmosphere.

more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

EMERGENCY ESCAPE AND RESCUE OPENING. An operable window, door or similar device that provides for a means of escape and access for rescue in the event of an emergency.

ENERGY. *The capacity for doing work taking a number of forms which may be transformed from one into another, such as thermal (heat), mechanical (work), electrical and chemical in customary units, measured in kilowatt-hours (kWh) or British thermal units (Btu) (J) (see “New energy”).*

NEW ENERGY. *Energy, other than recovered energy, utilized for the purpose of heating or cooling (see “Energy”).*

ENERGY ANALYSIS. *A method for determining the annual (8,760 hours) energy use of the proposed design and standard design based on hour-by-hour estimates of energy use.*

ENERGY EFFICIENCY RATIO (EER). *The ratio of net equipment cooling capacity in Btu/h (W) to total rate of electric input in watts under designated operating conditions. When*

THE MASSACHUSETTS STATE BUILDING CODE

consistent units are used, this ratio becomes equal to COP (see also “Coefficient of performance”).

EQUIPMENT. All piping, ducts, vents, control devices and other components of systems other than appliances that are permanently installed and integrated to provide control of environmental conditions for buildings. This definition shall also include other systems specifically regulated in 780 CMR 51.00 through 99.00.

EQUIPMENT, EXISTING. *Any equipment regulated by 780 CMR 51.00 through 99.00 which was legally installed prior to the effective date of 780 CMR 51.00 through 99.00, or for which a permit to install has been issued.*

EXPOSED FLOOR. *Floors that are part of the building envelope and are not enclosed by other building elements (e.g., cantilevers, floors built on pilings). For insulation purposes, these areas are to be treated as ceilings.*

EXTERIOR ENVELOPE. See “Building envelope”.

EXTERIOR INSULATION FINISH SYSTEMS (EIFS). Synthetic stucco cladding systems typically consisting of five layers: adhesive, insulation board, base coat into which fiber-glass reinforcing mesh is embedded, and a finish coat in the desired color.

EXTERIOR WALL. An above-grade wall enclosing conditioned space. Includes between floor spandrels, peripheral edges of floors, roof and basement knee walls, dormer walls, gable end walls, walls enclosing a mansard roof, and basement walls with an average below grade wall

Masonry Chimney. A field-constructed chimney composed of solid masonry units, bricks, stones or concrete.

Masonry Fireplace. A field-constructed fireplace composed of solid masonry units, bricks, stones or concrete.

FIREPLACE STOVE. A free-standing, chimney-connected solid-fuel-burning heater designed to be operated with the fire chamber doors in either the open or closed position.

FIREPLACE THROAT. The opening between the top of the firebox and the smoke chamber.

FIRE SEPARATION DISTANCE. The distance measured from the building face to the closest interior lot line, to the centerline of a street, alley or public way, or to an imaginary line between two buildings on the property. The

area that is less than 50% of the total opaque and non-opaque area of that enclosing side.

FACTORY-BUILT CHIMNEY. A listed and labeled chimney composed of factory-made components assembled in the field in accordance with the manufacturer’s instructions and the conditions of the listing.

FENESTRATION. Skylights, roof windows, vertical windows (whether fixed or moveable); opaque doors; glazed doors; glass block; and combination opaque/glazed doors.

FIBER CEMENT SIDING. A manufactured, fiber-reinforcing product made with an inorganic hydraulic or calcium silicate binder formed by chemical reaction and reinforced with organic or inorganic non-asbestos fibers, or both. Additives which enhance manufacturing or product performance are permitted. Fiber cement siding products have either smooth or textured faces and are intended for exterior wall and related applications.

FIREBLOCKING. Building materials installed to resist the free passage of flame to other areas of the building through concealed spaces.

[B] FIREPLACE. An assembly consisting of a hearth and fire chamber of noncombustible material and provided with a chimney, for use with solid fuels.

Factory-built Fireplace. A listed and labeled fireplace and chimney system composed of factory-made components, and assembled in the field in accordance with manufacturer’s instructions and the conditions of the listing.

distance shall be measured at right angles from the lot line.

[B] FLAME SPREAD. The propagation of flame over a surface.

[B] FLAME SPREAD INDEX. The numeric value assigned to a material tested in accordance with ASTM E 84.

FLOOR FURNACE. *A self-contained indirect-fired or electrically heated furnace designed to be suspended from the floor of the space being heated. A fuel-burning floor furnace is designed to take air for combustion from outside the space being heated, and is provided with means for observing flame and lighting the appliance from such space.*

FLUE. See “Vent.”

FLUE, APPLIANCE. The passages within an appliance through which combustion products pass from the combustion chamber to the flue collar.

FLUE COLLAR. The portion of a fuel-burning appliance designed for the attachment of a draft hood, vent connector or venting system.

FLUE GASES. Products of combustion plus excess air in appliance flues or heat exchangers.

FOUNDATION. *A base constructed to support any building or structure including, but not limited to, footings, floating foundation, piles and caissons.*

FOUNDATION WALL. *A wall below the floor nearest grade serving as a support for a wall, pier, column or other structural part of a building.*

[B] FOAM PLASTIC INSULATION. A plastic that is intentionally expanded by the use of a foaming agent to produce a reduced-density plastic consisting open or closed cells distributed throughout the plastic and that has a density less than 20 pounds per cubic foot (320 kg/m³).

FURNACE. *A vented heating appliance designed or arranged to discharge heated air into a conditioned space or through a duct or ducts. Note that 248 CMR and/or 527 CMR may have a definition for "Furnace" that is different than the Seventh Edition, Massachusetts Building Code for One- and Two-family Dwellings (780 CMR) definition.*

GLAZING AREA. The interior surface area of all glazed fenestration, including the area of sash, curbing or other framing elements, that enclose conditioned space. Includes the area of glazed fenestration assemblies in walls bounding conditioned basements. *For purposes of energy conservation, in doors where the daylight opening area is less than 50% of the door area, the glazing area is the daylight opening area.*

2. Pipe trenches, exterior terraces or steps, chimneys, roof overhangs and similar features.

GROUND-SOURCE HEAT PUMP LOOP SYSTEM. Piping buried in horizontal or vertical excavations or placed in a body of water for the purpose of transporting heat transfer liquid to and from a heat pump. Included in this definition are closed loop systems in which the liquid is recirculated and open loop systems in which the liquid is drawn from a well or other source.

For all other doors, the glazing area is the rough opening area for the door including the door and the frame.

GRADE. The finished ground level adjoining the building at all exterior walls.

GRADE FLOOR OPENING. A window or other opening located such that the sill height of the opening is not more than 44 inches (1118 mm) above or below the finished ground level adjacent to the opening.

[B] GRADE PLANE. A reference plane representing the average of the finished ground level adjoining the building at all exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than six feet (1829 mm) from the building between the structure and a point six feet (1829 mm) from the building.

GREENHOUSE. *An enclosed detached or attached accessory structure consisting primarily of light-transmitting materials and used exclusively for growing plants. In accordance with St. 1973, c. 672, the provisions of 780 CMR 51.00 through 99.00 shall not apply to greenhouses covered exclusively with plastic film; however, the provisions of M.G.L. c. 40A shall continue to apply*

GROSS AREA OF EXTERIOR WALLS. The normal projection of all exterior walls, including the area of all windows and doors installed therein.

GROSS FLOOR AREA. *The sum of the areas of all floors of the building, including basements, cellars, mezzanine and intermediate floored tiers and penthouses of headroom height, measured from the exterior faces of exterior walls or from the centerline of walls separating buildings, but excluding:*

1. Covered walkways, open roofed-over areas, porches and similar spaces.

GUARD. A building component or a system of building components located near the open sides of elevated walking surfaces that minimizes the possibility of a fall from the walking surface to the lower level.

[B] HABITABLE SPACE. A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

THE MASSACHUSETTS STATE BUILDING CODE

[B] HANDRAIL. A horizontal or sloping rail intended for grasping by the hand for guidance or support.

HANGERS. See “Supports.”

HAZARDOUS LOCATION. Any location considered to be a fire hazard for flammable vapors, dust, combustible fibers or other highly combustible substances.

HEAT. *The form of energy that is transferred by virtue of a temperature difference or a change in state of a material.*

HEATING DEGREE DAYS (HDD). The sum, on an annual basis, of the difference between 65°F (18°C) and the mean temperature for each day as determined from “NOAA Annual Degree Days to Selected Bases Derived from the 1960-1990 Normals” or other weather data sources acceptable to the code official.

HEAT TRAP. *An arrangement of piping and fittings, such as elbows, or a commercially available product, that prevents thermosiphoning of hot water during standby periods.*

HEATED SLAB. *Slab-on-grade construction in which the heating elements or hot air distribution system is in contact with or placed within the slab or the subgrade.*

HEATED SPACE. *Space within a building which is provided with a positive heat supply (see “Positive heating supply”). Finished living space within a basement with registers or heating devices designed to supply heat to a basement space shall automatically define that space as heated space.*

HEAT PUMP. An appliance having heating or heating/cooling capability and that uses refrigerants to extract heat from air, liquid or other sources.

HEATING SEASONAL PERFORMANCE FACTOR (HSPF). *The total heating output of a heat pump during its normal annual usage period for heating, in Btu, divided by the total HVAC SYSTEM EQUIPMENT. HVAC system equipment provides, in one (single package) or more (split system) factory-assembled packages, means for air circulation, air cleaning, air cooling with controlled temperature and dehumidification and, optionally, either alone or in combination with a heating plant, the functions of heating and humidifying. The cooling function is either electrically or heat operated and the refrigerant condenser is air, water or evaporatively cooled. Where the equipment is*

electric energy input during the same period, in watt hours, as determined by DOE 10 CFR Part 430, Subpart B, Test Procedures, and based on Region 4.

[B] HEIGHT, BUILDING. The vertical distance from grade plane to the average height of the highest roof surface.

[B] HEIGHT, STORY. The vertical distance from top to top of two successive tiers of beams or finished floor surfaces; and, for the topmost story, from the top of the floor finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters.

HIGH-TEMPERATURE (H.T.) CHIMNEY. A high temperature chimney complying with the requirements of UL 103. A Type H.T. chimney is identifiable by the markings “Type H.T.” on each chimney pipe section.

HOT WATER. Water at a temperature greater than or equal to 110°F (43°C).

HUMIDISTAT. *A regulatory device, actuated by changes in humidity, used for automatic control of relative humidity.*

HVAC. *Heating, ventilating and air conditioning.*

HVAC SYSTEM. *The equipment, distribution network and terminals that provide either collectively or individually the processes of heating, ventilating or air conditioning to a building or portion of a building.*

HVAC SYSTEM COMPONENTS. *HVAC system components provide, in one or more factory-assembled packages, means for chilling or heating water, or both, with controlled temperature for delivery to terminal units serving the conditioned spaces of the building. Types of HVAC system components include, but are not limited to, water chiller packages, reciprocating condensing units and water source (hydronic) heat pumps (see “HVAC system equipment”).*

provided in more than one package, the separate packages shall be designed by the manufacturer to be used together. The equipment shall be permitted to provide the heating function as a heat pump or by the use of electric or fossil-fuel-fired elements. (The word “equipment” used without a modifying adjective, in accordance with common industry usage, applies either to HVAC system equipment or HVAC system.)

ADMINISTRATION FOR SINGLE- AND TWO-FAMILY DWELLINGS

HURRICANE-PRONE REGIONS. Areas vulnerable to hurricanes, defined as the U.S. Atlantic Ocean and Gulf of Mexico coasts where the basic wind speed is greater than 90 miles per hour (177 km/h), and Hawaii, Puerto Rico, Guam, Virgin Islands, and America Samoa.

HYDROGEN GENERATING APPLIANCE. A self-contained package or factory-matched packages of integrated systems for generating gaseous hydrogen. Hydrogen generating appliances utilize electrolysis, reformation, chemical, or other processes to generate hydrogen.

IGNITION SOURCE. A flame, spark or hot surface capable of igniting flammable vapors or fumes. Such sources include appliance burners, burner ignitions and electrical switching devices.

INDIVIDUAL WATER SUPPLY. A supply other than an approved public water supply that serves one or more families.

INFILTRATION. *The uncontrolled inward air leakage through cracks and interstices in any building element and around windows and doors of a building caused by the pressure effects of wind or the effect of differences in the indoor and outdoor air density or both.*

INSPECTOR OF BUILDINGS. *The administrative chief of the building department in a municipality who is charged with the administration and enforcement of 780 CMR 51.00 through 99.00 (see also “Building commissioner” and “Building code enforcement official”). All inspectors of buildings shall meet or exceed the minimum qualifications defined by M.G.L. c. 143, § 3 and shall be certified in accordance with Special Regulation 780 CMR 110.R7.*

INSULATING CONCRETE FORM (ICF). A concrete forming system using stay-in-place forms of rigid foam plastic insulation, a hybrid of cement and foam insulation, a hybrid of cement and wood chips, or other insulating material for constructing cast-in-place concrete walls.

INSULATING SHEATHING. An insulating board having a minimum thermal resistance of R-2 of the core material.

JURISDICTION. The governmental unit that has adopted 780 CMR 51.00 through 99.00 under due legislative authority.

KITCHEN. Kitchen shall mean an area used, or designated to be used, for the preparation of food.

[B] LABEL. An identification applied on a product by the manufacturer which contains the name of the manufacturer, the function and performance characteristics of the product or material, and the name and identification of an approved agency and that indicates that the representative sample of the product or material has been tested and evaluated by an approved agency. (See also “Manufacturer’s designation” and “Mark.”)

LABELED. Devices, equipment or materials to which have been affixed a label, seal, symbol or other identifying mark of a testing laboratory, inspection agency or other organization concerned with product evaluation that maintains periodic inspection of the production of the above labeled items that attests to compliance with a specific standard.

LIGHT-FRAMED CONSTRUCTION. A type of construction whose vertical and horizontal structural elements are primarily formed by a system of repetitive wood or light gage steel framing members.

LISTED AND LISTING. Terms referring to equipment that is shown in a list published by an approved testing agency qualified and equipped for experimental testing and maintaining an adequate periodic inspection of current productions and whose listing states that the equipment complies with nationally recognized standards when installed in accordance with the manufacturer’s installation instructions.

[B] LIVE LOADS. Those loads produced by the use and occupancy of the building or other structure and do not include construction or environmental loads such as wind load, snow load, rain load, earthquake load, flood load or dead load.

LIVING SPACE. Space within a dwelling unit utilized for living, sleeping, eating, cooking, bathing, washing and sanitation purposes.

LOCAL ENFORCEMENT AGENCY. *A department or agency in a municipality charged with the enforcement of 780 CMR 51.00 through 99.00 and appropriate specialized codes which include, but are not limited to, 248 CMR, the State Plumbing and Gas Fitting Code, and 527 CMR 12.00, the State Electrical Code.*

LOCAL INSPECTOR. *A person in the municipality who assists the building commissioner or inspector of buildings in the performance of his or her duties and is charged with the enforcement of 780 CMR 51.00 through 99.00. All local inspectors shall meet or exceed the minimum qualifications defined by M.G.L. c.*

THE MASSACHUSETTS STATE BUILDING CODE

143, § 3 and shall be certified in accordance with Special Regulation 110.R7.

[B] LOT LINE. A line dividing one lot from another, or from a street or any public place.

LOW-RISE RESIDENTIAL BUILDING. *For purposes of energy conservation requirements only, residential occupancy buildings three stories or less in height (also see 780 CMR 61.00 for exceptions to this classification).*

MANUAL. *Capable of being operated by personal intervention (see “Automatic”).*

MANUFACTURED BUILDING. *Any building which has concealed elements, such as electrical, mechanical, plumbing, fire protection, insulation and other systems affecting health and safety, and which is manufactured and assembled in manufacturing facilities, on or off the building site. Also, any building as defined above which does not have concealed elements, but which has been approved by the BBRs at the request of the manufacturer.*

MANUFACTURED HOME. Manufactured home means a structure, transportable in one or more sections, which in the traveling mode is eight body feet (2438 body mm) or more in width or 40 body feet (12 192 body mm) or more in length, or, when erected on site, is 320 square feet (30 m²) or more, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning and electrical systems contained therein; except that such term shall include any structure that meets all the requirements of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the secretary (HUD) and complies with the standards established under this title. For mobile homes built prior to June 15, 1976, a label certifying compliance to the Standard for Mobile Homes, NFPA 501, in effect at the time of manufacture is required. For the purpose of 780 CMR 51.00 through 99.00, a mobile home shall be considered a manufactured home.

[B] MANUFACTURER’S DESIGNATION. An identification applied on a product by the manufacturer indicating that a product or material complies with a specified standard or set of rules. (See also “Mark” and “Label.”)

MANUFACTURER’S INSTALLATION INSTRUCTIONS. Printed instructions included with equipment as part of the conditions of listing and labeling.

[B] LOT. A portion or parcel of land considered as a unit.

[B] MARK. An identification applied on a product by the manufacturer indicating the name of the manufacturer and the function of a product or material. (See also “Manufacturer’s designation” and “Label.”)

MASONRY CHIMNEY. A field-constructed chimney composed of solid masonry units, bricks, stones or concrete.

MASONRY HEATER. A masonry heater is a solid fuel burning heating appliance constructed predominantly of concrete or solid masonry having a mass of at least 1,100 lb. (500 kg), excluding the chimney and foundation. It is designed to absorb and store a substantial portion of heat from a fire built in the firebox by routing exhaust gases through internal heat exchange channels in which the flow path downstream of the firebox includes at least one 180-degree (3.14-rad) change in flow direction before entering the chimney and which deliver heat by radiation through the masonry surface of the heater.

MASONRY, SOLID. Masonry consisting of solid masonry units laid contiguously with the joints between the units filled with mortar.

[B] MASONRY UNIT. Brick, tile, stone, glass block or concrete block conforming to the requirements specified in the *International Building Code* Section 2103.

Clay. A building unit larger in size than a brick, composed of burned clay, shale, fire clay or mixtures thereof.

Concrete. A building unit or block larger in size than 12 inches by four inches by four inches (305 mm by 102 mm by 102 mm) made of cement and suitable aggregates.

Glass. Nonload-bearing masonry composed of glass units bonded by mortar.

Hollow. A masonry unit whose net cross-sectional area in any plane parallel to the loadbearing surface is less than 75% of its gross cross-sectional area measured in the same plane.

Solid. A masonry unit whose net cross-sectional area in every plane parallel to the loadbearing surface is 75% or more of its cross-sectional area measured in the same plane.

MASS WALL. Masonry or concrete walls having a mass greater than or equal to 30 pounds per square foot (146 kg/m²), solid wood walls having a mass greater than or equal to 20 pounds per square foot (98 kg/m²), and any other walls

having a heat capacity greater than or equal to six Btu/ft² · °F [266 J/(m² · k)].

MEAN ROOF HEIGHT. The average of the roof eave height and the height to the highest point on the roof surface, except that eave height shall be used for roof angle of less than or equal to 10 degrees (0.18 rad).

Forced-draft Venting System. A portion of a venting system using a fan or other mechanical means to cause the removal of flue or vent gases under positive static pressure.

Induced Draft Venting System. A portion of a venting system using a fan or other mechanical means to cause the removal of flue or vent gases under nonpositive static vent pressure.

Power Venting System. A portion of a venting system using a fan or other mechanical means to cause the removal of flue or vent gases under positive static vent pressure.

MECHANICAL EXHAUST SYSTEM. A system for removing air from a room or space by mechanical means.

MECHANICAL SYSTEM. A system specifically addressed and regulated in 780 CMR 51.00 through 99.00 and composed of components, devices, appliances and equipment.

[B] METAL ROOF PANEL. An interlocking metal sheet having a minimum installed weather exposure of at least three square feet (0.28 m²) per sheet.

[B] METAL ROOF SHINGLE. An interlocking metal sheet having an installed weather exposure less than three square feet (0.28 m²) per sheet.

[B] MEZZANINE, LOFT. An intermediate level or levels between the floor and ceiling of any story with an aggregate floor area of not more than one-third of the area of the room or space in which the level or levels are located.

[B] MODIFIED BITUMEN ROOF COVERING. One or more layers of polymer modified asphalt sheets. The sheet materials shall be fully adhered or mechanically attached to the substrate or held in place with an approved ballast layer.

MULTIPLE STATION SMOKE ALARM. Two or more single station alarm devices that are capable of interconnection such that actuation of one causes all integral or separate audible alarms to operate.

MECHANICAL DRAFT SYSTEM. A venting system designed to remove flue or vent gases by mechanical means, that consists of an induced draft portion under nonpositive static pressure or a forced draft portion under positive static pressure.

NATIVE LUMBER. *Native lumber is wood processed in the Commonwealth of Massachusetts by a mill registered in accordance with Special Regulation 780 CMR 110.R4. Such wood is ungraded but is stamped or certified in accordance with the requirements of Special Regulation 780 CMR 110.R4. For the purpose of this definition, native lumber shall be restricted to the use in one- and two-story dwellings, barns, sheds, agricultural and accessory buildings and other structures when permitted by Special Regulation 780 CMR 110.R4.*

NATURAL DRAFT SYSTEM. A venting system designed to remove flue or vent gases under nonpositive static vent pressure entirely by natural draft.

NONCOMBUSTIBLE MATERIAL. Materials that pass the test procedure for defining noncombustibility of elementary materials set forth in ASTM E 136.

NONCONDITIONED SPACE. A space that is not a conditioned space by insulated walls, floors or ceilings.

OCCUPANCY. *The purpose for which a building, or portion thereof, is utilized or occupied.*

[B] OCCUPIED SPACE. The total area of all buildings or structures on any lot or parcel of ground projected on a horizontal plane, excluding permitted projections as allowed by 780 CMR 51.00 through 99.00.

OFFICIAL INTERPRETATION. *A written interpretation made by the BBRS, under authority of M.G.L. c. 143, § 94(e), or by the State Building Code Appeals Board under authority of M.G.L. c. 143, § 100 of any provision of 780 CMR 51.00 through 99.00, or its referenced standards as listed in Appendix A, except the specialized codes.*

OPAQUE AREAS. *All exposed areas of a building envelope which enclose conditioned space, except openings for windows, skylights, doors and building service systems.*

THE MASSACHUSETTS STATE BUILDING CODE

OWNER. *Every person who alone or jointly or severally with others*

- 1. has legal title to any building or structure; or*
- 2. has care, charge or control of any building or structure in any capacity including, but not limited to, agent, executor, executrix, administrator, administratrix, trustee or guardian of the estate of the holder of legal title; or*
- 3. lessee under a written lease agreement; or*
- 4. mortgagee in possession; or*
- 5. agent, trustee or other person appointed by the courts.*

Each such person is bound to comply with the provisions of 780 CMR 51.00 through 99.00.

PERSON. *Includes a corporation, firm, partnership, association, organization and any other group acting as a unit as well as individuals. It shall also include an executor, administrator, trustee, receiver or other representative appointed according to law. Whenever the word "person" is used in any section of 780 CMR 51.00 through 99.00 prescribing a penalty or fine, as to partnerships or associations, the word shall include the partners or members thereof, and as to corporations, shall include the officer, agent or members thereof who are responsible for any violation of such section.*

PITCH. *See "Slope."*

PLATFORM CONSTRUCTION. A method of construction by which floor framing bears on load bearing walls that are not continuous through the story levels or floor framing.

PLENUM. A chamber that forms part of an air-circulation system other than the occupied space being conditioned.

PLUMBING. For the purpose of 780 CMR 51.00 through 99.00, plumbing refers to those installations, repairs, maintenance and alterations regulated by *248 CMR, Commonwealth of Massachusetts Fuel Gas and Plumbing Code.*

PORTABLE FUEL CELL APPLIANCE. A fuel cell generator of electricity, which is not fixed in place. A portable fuel cell appliance utilizes a cord and plug connection to a grid-isolated load and has an integral fuel supply.

POSITIVE COOLING SUPPLY. *Mechanical cooling deliberately supplied to a space, such as through a supply register. Also, mechanical cooling indirectly supplied to a space through uninsulated surfaces of space-cooling components, such as evaporator coil cases and cooling distribution systems which continually*

PELLET FUEL-BURNING APPLIANCE. A closed combustion, vented appliance equipped with a fuel feed mechanism for burning processed pellets of solid fuel of a specified size and composition.

PELLET VENT. A vent listed and labeled for use with a listed pellet fuel-burning appliance.

[B] PERMIT. An official document or certificate issued by the authority having jurisdiction that authorizes performance of a specified activity.

maintain air temperatures within the space of 85 °F (29 °C) or lower during normal operation. To be considered exempt from inclusion in this definition, such surfaces shall comply with the insulation requirements of 780 CMR 51.00 through 99.00.

POSITIVE HEAT SUPPLY. *Heat deliberately supplied to a space by design, such as a supply register, radiator or heating element. Also, heat indirectly supplied to a space through uninsulated surfaces of service water heaters and space-heating components, such as furnaces, boilers and heating and cooling distribution systems which continually maintain air temperature within the space of 50 °F (10 °C) or higher during normal operation. To be considered exempt from inclusion in this definition, such surfaces shall comply with the insulation requirements of 780 CMR 51.00 through 99.00.*

[B] POSITIVE ROOF DRAINAGE. The drainage condition in which consideration has been made for all loading deflections of the roof deck, and additional slope has been provided to ensure drainage of the roof within 48 hours of precipitation.

POTABLE WATER. Water free from impurities present in amounts sufficient to cause disease or harmful physiological effects and conforming in bacteriological and chemical quality to the requirements of the public health authority having jurisdiction.

PRESSURE-RELIEF VALVE. A pressure-actuated valve held closed by a spring or other.

PUBLIC SEWER. A common sewer directly controlled by public authority.

PUBLIC WAY. Any street, alley or other parcel of land open to the outside air leading to a public

street, which has been deeded, dedicated or otherwise permanently appropriated to the public for public use and that has a clear width and height of not less than ten feet (3048 mm).

PURGE. To clear of air, gas or other foreign substances.

RADON GAS. *A naturally occurring, chemically inert, radioactive gas that is not detectable by human senses. As a gas, it can move readily through particles of soil and rock and can accumulate under the slabs and foundations of homes where it can easily enter into the living space through construction cracks and openings. Radon mitigation is not a requirement of 780 CMR 51.00 through 99.00. Persons interested in acquiring information about radon mitigation may contact the U.S. Environmental Protection Agency (EPA).*

R-VALUE, THERMAL RESISTANCE. The inverse of the time rate of heat flow through a building thermal envelope element from one of its bounding surfaces to the other for a unit temperature difference between the two surfaces, under steady state conditions, per unit area ($\text{h} \cdot \text{ft}^2 \cdot ^\circ\text{F}/\text{Btu}$).

[EB] REPAIR. The reconstruction or renewal of any part of an existing building for the purpose of its maintenance.

REPAIRS, ORDINARY. *Any maintenance which does not affect the structure, egress, fire protection systems, fire ratings, energy conservation provisions, plumbing, sanitary, gas, electrical or other utilities. A building permit is not required for ordinary repairs.*

[B] REROOFING. The process of recovering or replacing an existing roof covering. See “Roof recover.”

RESIDENTIAL BUILDING TYPE. *Detached one- and two-family dwellings are Type A-1. (Three or more family dwelling units, including apartment buildings, hotels, motels, “rowhousing” and “townhousing” are addressed in the Seventh Edition of the Massachusetts Basic Building Code).*

RETURN AIR. Air removed from an approved conditioned space or location and recirculated or exhausted.

[B] ROOF ASSEMBLY. *A system designed to provide weather protection and resistance to design loads. The system consists of a roof covering and roof deck or a single component serving as both the roof covering and the roof*

RAMP. A walking surface that has a running slope steeper than one unit vertical in 20 units horizontal (5% slope).

[B] REGISTERED DESIGN PROFESSIONAL. An individual who is registered or licensed to practice *his or her* respective design profession as defined by the statutory requirements of the professional registration laws of the *Commonwealth of Massachusetts*.

RELIEF VALVE, VACUUM. A device to prevent excessive buildup of vacuum in a pressure vessel.

RENEWABLE ENERGY SOURCES. *Sources of energy (excluding minerals) derived from incoming solar radiation, including natural daylighting and photosynthetic processes; from phenomena resulting therefrom, including wind, waves and tides, lake or pond thermal differences; and from the internal heat of the earth, including nocturnal thermal exchanges.*

deck. A roof assembly includes the roof deck, vapor retarder, substrate or thermal barrier, insulation, vapor retarder and roof covering. For purposes of addressing 780 CMR 61.00 energy conservation requirements a roof assembly shall be considered as all roof/ceiling components of the building envelope through which heatflows, thus creating a building transmission heat loss or gain, where such assembly is exposed to outdoor air and encloses conditioned space.

The gross area of a roof assembly consists of the total interior surface of all roof/ceiling components, including opaque surfaces, dormer and bay window roofs, treyed ceilings, overhead portions of an interior stairway to an unconditioned attic, doors and hatches, glazing and skylights exposed to conditioned space, that are horizontal or sloped at an angle less than 60 degrees (1.1 rad) from the horizontal (see “Exterior wall”). A roof assembly, or portions thereof, having a slope of 60 degrees (1.1 rad) or greater from horizontal shall be considered in the gross area of exterior walls and thereby excluded from consideration in the roof assembly. Skylight shaft walls 12 inches (305 mm) in depth or greater (as measured from the ceiling plane to the roofdeck) shall be considered in the gross area of exterior walls and are thereby excluded from consideration in the roof assembly.

THE MASSACHUSETTS STATE BUILDING CODE

[B] ROOF COVERING. The covering applied to the roof deck for weather resistance, fire classification or appearance.

[B] ROOF COVERING SYSTEM. *See* “Roof assembly”.

[B] ROOF DECK. The flat or sloped surface not including its supporting members or vertical supports.

[B] ROOF RECOVER. The process of installing an additional roof covering over a prepared existing roof covering without removing the existing roof covering.

[B] ROOF REPAIR. Reconstruction or renewal of any part of an existing roof for the purposes of its maintenance.

[B] ROOFTOP STRUCTURE. An enclosed structure on or above the roof of any part of a building.

ROOM HEATER. A freestanding heating appliance installed in the space being heated and not connected to ducts.

[B] RUNNING BOND. The placement of masonry units such that head joints in successive courses are horizontally offset at least one-quarter the unit length.

SASH CRACK. *The sum of all perimeters of all window sashes, based on overall dimensions of such parts, expressed in feet (mm). If a portion*

SINGLE PLY MEMBRANE. A roofing membrane that is field applied using one layer of membrane material (either homogeneous or composite) rather than multiple layers.

SINGLE STATION SMOKE ALARM. An assembly incorporating the detector, control equipment and alarm sounding device in one unit that is operated from a power supply either in the unit or obtained at the point of installation.

SKYLIGHT AND SLOPED GLAZING. *See* 780 CMR 5308.6.1.

SKYLIGHT, UNIT. *See* 780 CMR 5308.6.1.

SLAB-ON-GRADE FLOOR INSULATION. *Insulation around the perimeter of the floor slab or its supporting foundation when the top edge of the floor perimeter slab is above the finished grade or 12 inches (305mm) or less below the finished grade.*

of one sash perimeter overlaps a portion of another sash perimeter, only count the length of the overlapping portions once.

[B] SCUPPER. *An opening in a wall or parapet that allows water to drain from a roof.*

SEASONAL ENERGY EFFICIENCY RATIO (SEER). *The total cooling output of an air conditioner during its normal annual usage period for cooling, in Btu/h (W), divided by the total electric energy input during the same period, in watt-hours, as determined by DOE 10 CFR Part 430, Subpart B, Test Procedures.*

SEISMIC DESIGN CATEGORY. A classification assigned to a structure based on its Seismic Group and the severity of the design earthquake ground motion at the site.

SHALL. The term, when used in 780 CMR 51.00 through 99.00, is construed as mandatory.

[B] SHEAR WALL. A general term for walls that are designed and constructed to resist racking from seismic and wind by use of masonry, concrete, cold-formed steel or wood framing in accordance with 780 CMR 56 of 780 CMR 51.00 through 99.00 and the associated limitations in 780 CMR 5301.2.

SIMULATION TOOL. *An approved software program or calculation-based methodology that projects the hour-by-hour loads and annual energy use of a building.*

SLOPE. The fall (pitch) of a line of pipe in reference to a horizontal plane. In drainage, the slope is expressed as the fall in units vertical per units horizontal (percent) for a length of pipe.

SMOKE-DEVELOPED RATING. A numerical index indicating the relative density of smoke produced by burning assigned to a material tested in accordance with ASTM E 84.

SOLAR ENERGY SOURCE. *Source of natural daylighting and of thermal, chemical or electrical energy derived directly from conversion of incident solar radiation.*

SOLAR HEAT GAIN COEFFICIENT (SHGC). The solar heat gain through a fenestration or glazing assembly relative to the incident solar radiation (Btu/h · ft² · °F).

SOLID MASONRY. Load-bearing or nonload-bearing construction using masonry units where the net cross-sectional area of each unit in any plane parallel to the bearing surface is not less than 75% of its gross cross-sectional area. Solid

masonry units shall conform to ASTM C 55, C 62, C 73, C 145 or C 216.

SPECIALIZED CODE. *All building codes, rules or regulations pertaining to building construction, reconstruction, alteration, repair or demolition promulgated by and under the authority of the various agencies which have been authorized from time to time by the General Court of the Commonwealth of Massachusetts.*

STACK. Any main vertical DWV line, including offsets, that extends one or more stories as directly as possible to its vent terminal.

[B] STACK BOND. The placement of masonry units in a bond pattern is such that head joints in successive courses are vertically aligned. For the purpose of 780 CMR 51.00 through 99.00, requirements for stack bond shall apply to all masonry laid in other than running bond.

STANDARD DESIGN. *A version of the proposed design that meets the minimum requirements of 780 CMR 51.00 through 99.00 and is used to determine the maximum annual energy cost requirement for compliance based on total building performance.*

STANDARD TRUSS. Any construction that does not permit the roof/ceiling insulation to achieve the required R-value over the exterior walls.

STATE BUILDING CODE (780 CMR 51.00 through 99.00). *The Massachusetts State Building Code and amendments and rules and regulations thereto as promulgated by the State Board of Building Regulations and Standards, under M.G.L. c. 143, §§ 93 through 100.*

STATE INSPECTOR. *An employee of the Division of Inspection, Department of Public Safety, who is charged with administering and*

SUNROOM. *An addition to an existing building/dwelling unit where the total glazing area of said addition exceeds 40% of the combined gross wall and ceiling area of the addition.*

SUNROOM ADDITION. A one-story structure added to an existing dwelling with a glazing area in excess of 40% of the gross area of the structure's exterior walls and roof.

SUPPLY AIR. Air delivered to a conditioned space through ducts or plenums from the heat exchanger of a heating, cooling or ventilating system.

enforcing 780 CMR 51.00 through 99.00 relative to any structure or building or parts thereof that are owned by the Commonwealth or any departments, commissions, agencies or authorities of the Commonwealth. The state inspector is also charged with supervising the enforcement of 780 CMR 51.00 through 99.00 relative to all buildings and structures other than those owned by the Commonwealth.

STATIONARY FUEL CELL POWER PLANT.

A self-contained package or factory-matched packages which constitute an automatically-operated assembly of integrated systems for generating useful electrical energy and recoverable thermal energy that is permanently connected and fixed in place.

[B] STORY. That portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above.

[B] STORY ABOVE GRADE. Any story having its finished floor surface entirely above grade, except that a basement shall be considered as a story above grade where the finished surface of the floor above the basement is:

1. More than six feet (1829 mm) above grade plane.
2. More than six feet (1829 mm) above the finished ground level for more than 50% of the total building perimeter.
3. More than 12 feet (3658 mm) above the finished ground level at any point.

STRUCTURAL INSULATED PANELS (SIPS).

Factory fabricated panels of solid core insulation with structural skins of oriented strand board (OSB) or plywood.

STRUCTURE. That which is built or constructed.

SUPPORTS. Devices for supporting, hanging and securing pipes, fixtures and equipment.

SYSTEM. *A combination of central or terminal equipment or components or controls, accessories, interconnecting means and terminal devices by which energy is transformed so as to perform a specific function, such as HVAC, service water heating or illumination.*

THERMAL CONDUCTANCE. *Time rate of heat flow through a body (frequently per unit area) from one of its bounding surfaces to the other for a unit temperature difference between the two surfaces, under steady conditions (Btu/h · ft² · °F) [W/(m² · K)].*

THE MASSACHUSETTS STATE BUILDING CODE

THERMOSTAT. *An automatic control device actuated by temperature and designed to be responsive to temperature.*

TRAVEL TRAILER. *A vehicular, portable structure built on a chassis and designed to be used for temporary occupancy for travel, recreational or vacation use; with the manufacturer's permanent identification "Travel Trailer" thereon; and when factory equipped for the road, being of any length provided its gross weight does not exceed 4,500 pounds (2045 kg), or being of any weight provided its overall length does not exceed 28 feet (8534 mm).*

THERMAL ISOLATION. A separation of conditioned spaces, between a sunroom addition and a dwelling unit, consisting of existing or new wall(s), doors, and/or windows.

THERMAL RESISTANCE, R-VALUE. The inverse of the time rate of heat flow through a body from one of its bounding surfaces to the other for a unit temperature difference between the two surfaces, under steady state conditions, per unit area ($\text{h} \cdot \text{ft}^2 \cdot ^\circ\text{F}/\text{Btu}$).

THERMAL TRANSMITTANCE, U-FACTOR. The coefficient of heat transmission (air to air) through a building envelope component or assembly, equal to the time rate of heat flow per unit area and unit temperature difference between the warm side and cold side air films ($\text{Btu}/\text{h} \cdot \text{ft}^2 \cdot ^\circ\text{F}$).

TRIM. Picture molds, chair rails, baseboards, handrails, door and window frames, and similar decorative or protective materials used in fixed applications.

TRUSS DESIGN DRAWING. The graphic depiction of an individual truss, which describes the design and physical characteristics of the truss.

U-FACTOR, THERMAL TRANSMITTANCE. The coefficient of heat transmission (air to air) through a building envelope component or assembly, equal to the time rate of heat flow per unit area and unit temperature difference between the warm side and cold side air films ($\text{Btu}/\text{h} \cdot \text{ft}^2 \cdot ^\circ\text{F}$).

VAPOR PERMEABLE MEMBRANE. A material or covering having a permeance rating of 5 perms ($52.9 \cdot 10^{-10} \text{ kg}/\text{Pa} \cdot \text{s} \cdot \text{m}^2$) or greater, when tested in accordance with the desiccant method using Procedure A of ASTM E96. A vapor permeable material permits the passage of moisture vapor.

UNCONFINED SPACE. A space having a volume not less than 50 cubic feet per 1,000 Btu/h ($4.8 \text{ m}^3/\text{kW}$) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed, through openings not furnished with doors, are considered a part of the unconfined space.

[B] UNDERLAYMENT. One or more layers of felt, sheathing paper, nonbituminous saturated felt, or other approved material over which a roof covering, with a slope of two to 12 (17% slope) or greater, is applied.

UNITARY COOLING AND HEATING EQUIPMENT. *One or more factory-made assemblies which include an evaporator or cooling coil, a compressor and condenser combination, and which shall be permitted to include a heating function as well. When heating and cooling equipment is provided in more than one assembly, the separate assemblies shall be designed to be used together.*

UNITARY HEAT PUMP. *One or more factory-made assemblies which include an indoor conditioning coil, compressor(s) and outdoor coil or refrigerant-to-water heat exchanger, including means to provide both heating and cooling functions. When heat pump equipment is provided in more than one assembly, the separate assemblies shall be designed to be used together.*

UNUSUALLY TIGHT CONSTRUCTION. Construction meeting the following requirements:

1. Walls comprising the building thermal envelope have a continuous water vapor retarder with a rating of one perm [$57.4 \text{ ng}/(\text{s} \cdot \text{m}^2 \cdot \text{Pa})$] or less with openings therein gasketed or sealed.
2. *Doors and openable windows meet the air leakage requirements of International Energy Conservation Code Section 502.1.4.1.*
3. Caulking or sealants are applied to areas such as joints around window and door frames between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical and gas lines, and at other openings.

[B] VAPOR RETARDER. A vapor resistant material, membrane or covering such as foil, plastic sheeting, or insulation facing having a permeance rating of 1 perm ($5.7 \cdot 10^{-11} \text{ kg}/\text{Pa} \cdot \text{s} \cdot \text{m}^2$) or less, when tested in accordance with the desiccant method using Procedure A of ASTM E 96. Vapor retarders limit the amount of moisture vapor that passes through a material or wall assembly.

VENT. A passageway for conveying flue gases from fuel-fired appliances, or their vent connectors, to the outside atmosphere.

VENT COLLAR. See “Flue collar.”

VENT CONNECTOR. That portion of a venting system which connects the flue collar or draft hood of an appliance to a vent.

VENT DAMPER DEVICE, AUTOMATIC. A device intended for installation in the venting system, in the outlet of an individual, automatically operated fuel burning appliance and that is designed to open the venting system automatically when the appliance is in operation and to close off the venting system automatically when the appliance is in a standby or shutdown condition.

VENT GASES. Products of combustion from fuel-burning appliances, plus excess air and dilution air, in the venting system above the draft hood or draft regulator.

VENT STACK. A vertical vent pipe installed to provide circulation of air to and from the drainage system and which extends through one or more stories.

VENT SYSTEM. Piping installed to equalize pneumatic pressure in a drainage system to prevent trap seal loss or blow-back due to siphonage or back pressure.

[B] VENTILATION. The natural or mechanical process of supplying conditioned or unconditioned air to, or removing such air from, any space.

VENTING. Removal of combustion products to the outdoors.

VENTING SYSTEM. A continuous open passageway from the flue collar of an appliance to the outside atmosphere for the purpose of removing flue or vent gases. A venting system is usually composed of a vent or a chimney and vent connector, if used, assembled to form the open passageway.

VERTICAL PIPE. Any pipe or fitting that makes an angle of 45 degrees (0.79 rad) or more with the horizontal.

[B] WALLS. Walls shall be defined as follows:

Load-bearing Wall is a wall supporting any vertical load in addition to its own weight.

Nonbearing Wall is a wall which does not support vertical loads other than its own weight.

WIND BORNE DEBRIS REGION. Areas within hurricane-prone regions within one mile of the coastal mean high water line where the basic wind speed is 110 miles per hour (177 km/h) or greater; or where the basic wind speed is equal to or greater than 120 miles per hour (193 km/h); or Hawaii. The coastal mean high water line, in the Massachusetts 110 mph wind zones, forms the outer edge of the red bands overlaid onto the satellite images found on the MA Department of Public Safety website at www.mass.gov/dps. For estimating purposes, the inner edge of the red bands is approximately one mile inland from coastal mean high water. For buildings in close proximity to the inner edge of the red band, to determine whether a building is in a wind borne debris region, the building official shall use a survey, provided with the permit application and the building plan, which indicates the distance, in feet, from the location of the proposed building to the closest location of the coastal mean high water line as described.

WINDER. A tread with non-parallel edges.

[B] WOOD STRUCTURAL PANEL. A panel manufactured from veneers; or wood strands or wafers; bonded together with waterproof synthetic resins or other suitable bonding systems. Examples of wood structural panels are plywood, OSB or composite panels.

WRITTEN NOTICE. *A notification in writing delivered in person to the individual or parties intended; or delivered at, or sent by certified or registered mail to the last residential or business address of legal record.*

[B] YARD. *An open space, other than a court, unobstructed from the ground to the sky, except where specifically provided by 780 CMR 51.00 through 99.00, on the lot on which a building is situated.*

ZONE. *A space or group of spaces within a building with heating or cooling requirements, or both, sufficiently similar so that comfort conditions can be maintained throughout by a single controlling device.*

ZONING. *The reservation of certain specified areas within a community or city for buildings and structures, or use of land, for certain purposes with other limitations such as height, lot coverage and other stipulated requirements (see M.G.L. c. 40A and St. 1956, c. 665, as amended).*

